

APPENDIX A

Acronyms and Definitions

APPENDIX A: ACRONYMS & DEFINITIONS

ACRONYMS

AQD	Air Quality Division (of DEQ)
BACT	Best Available Control Technology
CAA	Clean Air Act
CFC	Chlorofluorocarbon
CFR	Code of Federal Regulations
CJ	Consent Judgment
CO	Consent Order
DEQ	Michigan Department of Environmental Quality
EPA	United States Environmental Protection Agency
HAP	Hazardous Air Pollutant
LAER	Lowest Achievable Emission Rate
MACT.....	Maximum Achievable Control Technology
MAERS	Michigan Air Emissions Reporting System
NAAQS	National Ambient Air Quality Standard
NAICS.....	North American Industrial Classification System
NESHAP	National Emission Standard for Hazardous Air Pollutant(s)
NREPA	Natural Resources and Environmental Protection Act (Public Act 451 of 1994)
NSPS	New Source Performance Standard
NSR	New Source Review
PASS	Permit Application Submittal System
PSD	Prevention of Significant Deterioration
PTE.....	Potential to Emit
PTI	Permit to Install
RACT	Reasonable Available Control Technology
RMP.....	Risk Management Plan
ROP	Renewable Operating Permit
SCC	Source Classification Code
SIC.....	Standard Industrial Classification
TAC	Toxic Air Contaminant
T-BACT.....	Best Available Control Technology for Toxics
VOC	Volatile Organic Compound

DEFINITIONS

Actual Emissions: Amount of air contaminants emitted from a facility or process device over a given period of time, usually expressed as tons of air contaminant emitted per year (tons/yr). Facilities having to apply for a ROP are subject to an annual fee based partly on their actual emissions.

Air Contaminant: Defined in Rule 101(f) of the Michigan Air Pollution Control Rules as a dust, fume, gas, mist odor, smoke, vapor or any combination thereof.

Applicable Requirement: All federal and state air quality rules, regulations, permits, orders, and judgments that apply to process devices at a facility. *This term is further defined in Rule 101(o) of the Michigan Air Pollution Control Rules (see Appendix C for the rule).*

Application Shield: Defined in Rule 210(1) of the Michigan Air Pollution Control Rules as the ability to operate process and process equipment at a stationary source while a timely and administratively complete application is being reviewed and acted upon by the department. An application is considered timely pursuant to Rule 210(4)-(7) and it is considered administratively complete pursuant to Rule 210(2). Failure to provide a timely response to information requests may result in loss of the application shield. Loss of the application shield is grounds for enforcement action pursuant to Rule 210(1) (see Appendix C for Rule 210(1)).

Best Available Control Technology (BACT): An emission limitation based on the maximum degree of emission reductions that can be achieved through the application of available production methods, systems and techniques. Energy costs, environmental and economic impacts, and other factors are also taken into consideration.

Clean Air Act (CAA): Amendments to the federal Clean Air Act were signed into law on November 15, 1990. The main points of the amendments include attainment deadlines for non-attainment areas for National Ambient Air Quality Standard (NAAQS) pollutants, guidelines for reduction of motor vehicle emissions, and air toxics that utilize Maximum Achievable Control Technology (MACT) standards. Likewise, plans for reducing acid rain precursors, sulfur oxides (SO_x) and nitrogen oxides (NO_x), are outlined. The operating permit program is introduced in Title V, stating that every major pollution source must have an operating permit, renewed every five years, that specifies its compliance requirements. The remaining parts of the Act include enforcement, climatic protection through the phase-out of chlorofluorocarbons (CFCs) and other stratospheric ozone damaging chemicals, and the final part which provides for research programs and monitoring activities.

Code of Federal Regulations (CFR): Regulations published by the executive departments and agencies of the federal government. Title 40 of the CFR contains all of the federal rules and regulations relating to protection of the environment.

Confidential Information: Specific information identified as confidential in the application which will not be made available to the general public. Information which may be kept confidential is limited. An AI-001 must be completed for all confidential information. See *Operational Memorandum No. 10 – Procedures for Handling of Confidential Materials and Freedom of Information Requests for Confidential Materials* for details on what may be kept confidential. Additional instructions concerning confidential information can be found in the instructions for AI-001.

Criteria air contaminants: Six air contaminants (ozone, carbon monoxide, particulate matter, sulfur dioxide, lead, and nitrogen dioxide) determined by the EPA to be hazardous to human health. The term “criteria air contaminant” comes from the requirement that EPA must describe the characteristics and potential health and welfare effects of these pollutants.

Emission Limit: Restriction on the amount of a particular air contaminant that can be released from an emission unit or facility over a specified time period. Emission limits are commonly expressed as a concentration (grains per dry standard cubic foot) or rate (pounds per hour).

Emission Thresholds: Levels of emission rates (pounds/hour or tons/year) above which certain rules or permit requirements apply.

Emission Unit: A device or a group of devices that operate together with a dependency between devices. An emission unit contains one or more process devices and zero or more control devices and related stacks. See *Operational Memorandum No. 6 – Procedures for Determining Emission Units* for additional guidance on determining emission units.

Exempt Emission Unit: A device or a group of devices that operate together with a dependency between devices that are exempt from Rule 210 pursuant to Rule 212. See Rule 212 for a complete list of emission units that are exempt from Rule 210 (see Appendix C for the rule). Also refer to the detailed instructions for EU-001.

Facility: See definition of stationary source.

Form Type: An alphanumeric identifier created by the AQD to identify each form (e.g., S-001, EU-001, AR-001).

Grandfathered: The Michigan Air Pollution Control Rules became effective on August 15, 1967. Therefore, any emission unit constructed after August 15, 1967, would be subject to the regulatory requirements enacted on that date. Emission units installed, modified or reconstructed before August 15, 1967 are not required to apply for a permit to install pursuant to Rule 201. For example, an emission unit installed in January 1965 would be grandfathered from Rule 201 if it was not modified or reconstructed after August 15, 1967. In general, an emission unit is considered to be grandfathered if it was installed, modified or reconstructed prior to the promulgation date of an applicable requirement, unless the applicable requirement applies to existing emission units.

Hazardous Air Pollutants (HAPs): Air pollutants that are not covered by ambient air quality standards but which, as defined in the CAA, may reasonably be expected to cause or contribute to irreversible illness or death. The HAPs are defined in Section 112(b) of the CAA and listed in 40 CFR Part 63, Subpart C. A complete list of HAPs can be viewed at the USEPA web site www.epa.gov/oar/caa/caa112.txt.

ID Prefix: A code created by the AQD for specific types of IDs. The prefix becomes part of the ID and must be included whenever the ID is used. The following is a list of the ID prefixes:

- AI - Additional Information
- AR – Applicable Requirement
- EU - Emission Unit (including exempt EU)
- SV – Stack and Vent

Lead: Heavy metal that is hazardous to human health when breathed or swallowed. Its use in gasoline, paints, and plumbing compounds has been sharply restricted or eliminated by federal laws and regulations. (See criteria air contaminants.)

Major Source: Any facility emitting or having the potential to emit 10 tons per year of any hazardous air pollutant (HAP), 25 tons per year of any combination of HAPs, or 100 tons per year of any

regulated air contaminant. *This term is further defined in 40 CFR Part 70 – State Operating Permit Programs (70.2 Definitions). Access 40 CFR 70.2 at www.epa.gov/epacfr40/chapt-I.info/chi-toc.htm.*

Maximum Achievable Control Technology (MACT): An emission limitation that is equivalent to or more stringent than an emission limitation achieved, in practice, by the best controlled similar affected source. The emission limitation shall reflect the maximum degree of reduction in emissions that the permitting authority determines is achievable by the constructed or reconstructed major source. See the USEPA Unified Air Toxics web site www.epa.gov/ttn/atw/eparules.html. See also *Operational Memorandum No. 15 – Procedures for Processing Permit Applications Subject to Federal Clean Air Act Section 112(g)* for additional details regarding case-by-case MACT determinations. The MACT standards are published as National Emission Standard for Hazardous Air Pollutants (NESHAP) in 40 CFR Part 63.

Modification: Making a physical or operational change in an existing emission unit which will increase the amount of any air contaminant not already allowed to be emitted under the conditions of a current permit or order. Also, a modification cannot result in the emission of any toxic air contaminant into the outer air not previously emitted. An increase in the hours of operation or an increase in the production rate up to the maximum capacity of the process or process equipment shall not be considered to be a change in the method of operation. The exception to this is if the process equipment is subject to enforceable permit conditions or enforceable orders which limit the production rate or the hours of operation; or both, to a level below the proposed increase.

National Ambient Air Quality Standards (NAAQS): Air quality standards established by the USEPA that apply to outside air throughout the country. The NAAQS set standards for six pollutants known as the criteria air pollutants to protect human health and welfare. The criteria air pollutants include: ozone (O₃), carbon monoxide (CO), total suspended particulate matter (PM), sulfur dioxide (SO₂), Lead (Pb), and nitrogen dioxide (NO₂).

National Emission Standard for Hazardous Air Pollutants (NESHAP): Emission standards set by the USEPA for air contaminants not covered by the NAAQS that may cause an increase in death or serious irreversible or incapacitating illness. The NESHAP regulations are promulgated in 40 CFR Parts 61 and 63. The NESHAP regulations promulgated prior to the CAA were published in 40 CFR Part 61. The NESHAP regulations promulgated as a result of the CAA are published in 40 CFR Part 63.

New Source Performance Standards (NSPS): Uniform national U.S. EPA air emissions standards that limit the amount of pollution allowed from specific new sources or from existing sources that have been modified or reconstructed. The purpose of NSPS is for new sources of emissions to emit less pollution than their predecessors. The NSPS regulations are promulgated in 40 CFR Part 60.

New Source Review (NSR) Permit: A Permit to Install, required by Rule 201, which authorizes the construction, installation, relocation or alteration of any process, fuel-burning, refuse-burning or control equipment in accordance with approved plans and specifications.

Nitrogen oxides (NOx): Oxides of nitrogen (except nitrous oxide) that are regulated because they can cause lung and eye irritation, can contribute to the formation of acid rain, and react in the atmosphere to form ozone and smog. (See criteria air contaminants.)

Operator's ID: A unique ID created by the source to identify and reference information in the application. The Operator's ID consists of a pre-established ID Prefix (e.g., EU, FG, AR, MS and AI) and up to 14 additional alphanumeric characters. Please see page 3-10 "Creating Operator IDs."

Ozone: At ground level, ozone is a noxious pollutant and is the major component of smog. The source of ozone is the chemical reaction of volatile organic compounds (VOC) and nitrogen oxides (NOx). Health effects of ozone are breathing problems, reduced lung function, asthma, eye irritation, stuffy nose, and reduced resistance to colds and other infections. Environmental effects of ozone can damage plants and trees. Smog also causes reduced visibility. Ozone is regulated by control of VOCs and NOx, which are precursors to ozone. (See criteria air contaminants.)

Parametric Monitoring: A system that tracks process operating data and/or control data and uses the data as indicators for emissions. Parameters that may be measured include: vapor pressure, pressure drop, air flow, liquid flow, temperature, viscosity, pH, breakthrough, horsepower, water to fuel ratio, pounds of pollutant per time period, pounds of VOC per gallon applied coating solids, or visible emissions. Predictive Emission Monitoring Systems (PEMS) and Recordkeeping are parametric monitoring systems.

Particulate matter (PM): Fine liquid or solid particles such as dust, smoke, mist, fumes or smog found in air or emissions. (See PM-10 and criteria air contaminants.)

Periodic Monitoring: Monitoring, recordkeeping, testing or reporting requirements that are sufficient for making a compliance determination for an emission limit and/or restrictions.

Permit Application Submittal System (PASS): The ROP application may be generated and submitted electronically by using the PASS-ROP software. This software also allows the source to perform a preliminary electronic completeness check prior to submittal. The AQD is required to provide an administrative completeness determination and notification within 15 days of receipt of the submittal, pursuant to Rule 210(2)(a)(i)(B), when the PASS software is used by the applicant. This software is available upon request. See Appendix D for contact information.

Permit to install: Permit issued by the Michigan Department of Environmental Quality that authorizes the installation of new equipment or the modification of existing equipment that emits air contaminants. According to Rule 201 of the Michigan Air Pollution Control Rules, a person must apply for and receive an approved permit to install before beginning the installation of a process. The purpose of the permit is to ensure that the proposed process will comply with all of the applicable state and federal air quality requirements at the time it begins operation. The process involved in the issuance of the Permit to Install is sometimes referred to as New Source Review (NSR).

PM-10: Standard for measuring the amount of solid or liquid matter suspended in the atmosphere. PM-10 refers to the amount of particulate matter smaller than 10 micrometers in diameter. The smaller PM-10 particles penetrate to the deeper portions of the lung, affecting sensitive population groups such as children and people with respiratory diseases.

Potential to Emit (PTE): The maximum capacity of a stationary source to emit an air contaminant under its current physical and operational design. Any physical or operational limit on the capacity of the stationary source to emit an air contaminant (e.g., air pollution control equipment, restrictions on hours of operation, the type or amount of material combusted, stored or processed) shall be treated as part of its design only if such limit, or the effect it would have on emissions, is legally enforceable. For more information about determining potential to emit go to www.michigan.gov/deqair (select "Clean Air Assistance" then "Potential to Emit").

Prevention of Significant Deterioration (PSD): A program that was established in Title I of the CAA and is used in the development of permits for new or modified sources in an area that is already in attainment. The intent of PSD is to prevent an attainment area from becoming a nonattainment area.

Process device: Equipment or activity that generates air contaminants, e.g. boiler.

Reasonably Achievable Control Technology (RACT): The lowest emissions limit that a particular source is capable of meeting by the application of control technology that is both reasonably available, as well as technologically and economically feasible. The RACT is usually applied to existing sources in nonattainment areas.

Reconstruction: The replacement of components of an existing emission unit so that the fixed capital cost of the new components is more than 50 percent of the fixed capital cost that would be required to construct a comparable new emission unit and so that it is technologically and economically feasible to meet the applicable requirement.

Regulated Air Contaminant: Any dust, fume, gas, mist, odor, smoke, vapor, or any combination thereof that is sanctioned under the Michigan Natural Resources and Environmental Protection Act or the Michigan Air Pollution Control Rules.

Renewable operating permit (ROP) (Title V permit): Air emission permit issued under Rules 210 through 218 of the Michigan Air Pollution Control Rules and 40 CFR 70.

Responsible Official: Defined in Rule 118(j) (see Appendix C for the rule).

SIC code: The Standard Industrial Classification (SIC) code is a numerical indicator of the primary type of activity at a business. For example, 5153 is a grain elevator, 2951 is an asphalt plant, etc. The first two digits indicate the broad category, the second two digits are more industry-specific.

Source Classification Code (SCC): An eight-character code that provides a detailed description of the processes associated with an emission unit. Refer to the electronic SCC table on the Internet at www.deq.state.mi.us/maers. This table is also available upon request by contacting the AQD district office for your area. See Appendix D for contact information.

Source Wide Requirement: Any applicable requirement that applies to the entire stationary source. For example, a synthetic minor HAP emission limit and associated recordkeeping that applies to the entire stationary source.

State Registration Number (SRN): The alphanumeric identifier assigned to a stationary source by the AQD. The SRNs are unique to a source and are comprised of a letter followed by four digits (e.g., A1497). If a source does not have an SRN, leave the SRN blank on all application forms. An SRN will be assigned during the ROP application review. However, a source must have an SRN to use the PASS-ROP software.

Stationary Source: All buildings, structures, facilities, or installations that emit or have the potential to emit air contaminants, are under the control of the same person, and have the same 2-digit major group code associated with their primary activity (including those with a different 2-digit major group code that support the primary activity). *This term is further defined in Rule 119(q) (see Appendix C for the rule).* See also *Operational Memorandum No. 11 – Stationary Source Determinations* for details regarding stationary source determinations.

Sulfur dioxide (SO₂): Heavy, pungent, colorless, gaseous air pollutant formed primarily by industrial fossil fuel combustion processes. (See criteria air contaminants.)

Title I: Refers to Title I of the CAA of 1990, which protects ambient air quality. Title I includes regulations pertaining to PSD, NSPS, NESHAP and NSR.

Title V: Refers to Title V of the CAA Amendments of 1990, which established the requirements for the ROP Program.

Toxic Air Contaminant (TAC): Defined in Rule 120(f).

Underlying Applicable Requirement (UAR): The regulatory foundation on which an applicable requirement is based. For example, if an NSR permit contains a condition that limits the sulfur content in fuel oil, the permit condition is an applicable requirement. The underlying basis for creating this condition is Rule 401; therefore, Rule 401 is the underlying applicable requirement.

Volatile Organic Compounds (VOCs): Any organic compound that participates in smog-forming reactions except for those designated by the EPA Administrator as having negligible photochemical reactivity.

